

Dynamic characteristics of ...

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$$\frac{\Phi(p)}{\Phi_0} = \frac{1 + (1 - \beta_e) p T_e}{1 + p T_e} \quad (15)$$

where

$$\beta_e = \sum_{i=1}^k \alpha_i \beta_i \quad (16)$$

For a full cylinder $\beta = 0.69$ and for a flat disc $\beta = 0.81$. From (12) and (15) time characteristics are obtained; for high frequencies

$$\Phi_1^*(t) = \frac{2}{\sqrt{\pi}} a \sqrt{t} \quad (17)$$

where

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$$\Phi_1^*(t) = \frac{\Phi(t)}{\Phi_0} \quad \text{and} \quad a = \frac{2}{\pi \sum_1^k \alpha_1 (1 + \xi_1) \frac{(1 + \xi_1)}{2}}, \quad \bar{t} = \frac{t}{T_e}$$

for low frequencies

$$\Phi_2^*(t) = 1 - \beta_e e^{-\bar{t}} \quad (18)$$

The boundary point between (17) and (18) is $\Phi^*(\bar{t}_{ein}) \approx 0.5$ and, approximately, $t_{ein} = 0.465 T_e$. The characteristic of the clutch is a parabola of 0.5 order at high frequencies, and an exponential of second order at low frequencies. Similar expressions are obtained for the voltage supply case; time characteristic is of the type

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$$\frac{\Phi_e^t}{\Phi_0} = 1 - Ae^{p_1 t} - Be^{p_2 t} \quad (23)$$

When the clutch is switched off, time characteristics can be obtained by subtracting (17) and (18) from unity. Amplitude and phase characteristics are obtained directly from (12) and (15) by substituting $p = j\omega$. Logarithmic characteristics are: for high frequencies

$$20 \lg [W_1(\omega)] = - [4 + 10 \lg \omega T] \quad (34)$$

for low frequencies

$$20 \lg [W_2(\omega)] = 10 \lg [1 + (1 - \beta)^2 \omega^2 T^2] - 10 \lg (1 + \omega^2 T^2) \quad (35)$$

The bandwidth of the clutch as determined by the level of 10 - 14 M is 4 - 10 units of relative frequency. The equations of the charac-

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teristics are also given for $M = K_m \phi^n$ and $n \neq 1$. A complete engineering calculation of a clutch is given in the appendix: The reluctance of the magnetic circuit is first found, then the equivalent time constant and the cut-off frequency at 12 db level; from the ratio of the control and equivalent time constants, the need for forcing the control is determined. There are 5 figures and 8 references: 6 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: H. Herne, Journ. of the Iron and Steel Institute, v. 172, XII, 1952, p. 4.

SUBMITTED: August 31, 1961

Card 9/9

TATUR, O.N., inzh.; FLIDLIDER, G.M., inzh.

Dynamic characteristics of high-speed electromagnetic
clutches. Vest. elektrom. 34 no.7:13-20 J1 '63.
(MIRA 16:8)

IL'ICHEV, Dmitriy Dmitriyevich; TATUR, Oleg Nikolayevich;
FLIDLIDER, Grigoriy Maksovich. Prinimal uchastiye EDEMSKII,
V.M.; ANOSOV, Yu.O., red.; CHILIKIN, M.G., prof., red.

[Systems with electromagnetic clutches] Sistemy s elektro-
magnitnymi muftami. Moskva, Energiia, 1965. 96 p.
(MIRA 18:3)

FLIEGER, Nandor

Properties of Hungarian-made welding materials and description
of their fields of application. Elelm ipar 17 no.11:343-348
N°63.

1. Csepeli Femmu Elektrodagyara.

FLIEGER, Nandor

Present state of welding material production in Hungary.
Gep 16 no. 3:111-117 Mr '64.

1. Head, Electrode Factory of the Csepel Metalworks.

EXCERPTA MEDICA Sec 6 Vol 13/7 Internal Med. July 50

3995. THE SYMPTOMS OF ALBERS-SCHÖNBERG DISEASE IN THE ORAL
CAVITY - Objawy choroby Albers-Schoenberga w jamie ustnej - Flieger S.
Klin. Chir. Stomatol. A.M., Wrocław - CZAS. STOMAT. 1957, 10/4 (195-202)
illus. 12

A case of a 50-year-old man is described in whom the recurrent inflammation of
the jaw bones was finally traced to osteosclerosis fragilis generalisata or Albers-
Schönberg disease. In addition the defects in the development of the jaw bones
and dentition in 4 siblings affected by the disease are reported. Japa - Krakow

FLIEGER, 2.

Supplementary equipment for cutting progressive worm-gears.

P. 314, (Strojirenska Vyroba) Vol. 5, no. 7, July, 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Acessions (EEAI) Vol. 6, No. 11 November 1957

FLIEGL, J.

"Breeding of plants to make them frost resistant."

VESTNIK. Praha, Czechoslovakia, Vol. 5, No. 7/8, 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September 1959.

Unclassified.

SOV/109-59-4-2-7/27

AUTHOR: Al'pert, Ya.L., and Fligel', D.S.

TITLE: Synthesis of the Shape of the Atmospherics and the Effective Parameters of the Lower Portion of the Ionosphere at Low Frequencies (Sintez formy atmosferikov i effektivnyye parametry nizhney chasti ionosfery na nizkikh chastotakh)

PERIODICAL: Radiotekhnika i Elektronika, 1959, Vol 4, Nr 2, pp 202-211 (USSR)

ABSTRACT: The article gives the results of a theoretical evaluation of the shape of the atmospherics (produced by lightning discharges), $E(t, r)$, and compares it with the actual signals received from distances ranging from 500 to 3,000 km from the source. The synthesis of the atmospherics is defined as the determination of the signal $E(t, r)$ at the point of observation situated at a distance r from the source. This is equivalent to the evaluation of the Fourier integral:

$$E(t, r) = \frac{1}{2\pi} \int_{-\infty}^{\infty} g(\omega, r) Q_0(\omega, 0) e^{i\omega t} d\omega \quad (1)$$

Card 1/4 where g is the electric or magnetic field over the

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Parameters of the Lower Portion of the Ionosphere at Low Frequencies

earth surface, having a frequency ω , which is produced by a dipole of unit intensity; this is defined by Eq (2). The function Q_0 is the spectral density of the radiation source, which is defined by Eq (3). As was shown earlier by the authors (Ref 1 and 4), the function Q_0 can be defined by a standard source whose amplitude and phase components are given by Eq (3a). The wave numbers kSn and other parameters of Eq (2) can be evaluated approximately (Ref 3) by employing Eq (4) where h denotes the height of the ionosphere, N is the electron concentration in the ionosphere and ν is the number of electron collisions. In these equations it is assumed that the waves are propagated in a waveguide, formed by the earth surface and the ionosphere (Ref 3). The above equations were used to evaluate N/ν , S_{01} , S_{02} and p as a function of frequency. Results are shown in Table 1. On the basis of Eq (1) and Eq (3a), the received signal can be written in the form of Eq (8) or as Eq (9). Since the sub-integral function of Eq (9) can be written in the form of the Fourier series, as defined by Eq (10),

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the received signal can be represented by the series of Eq (11). Eq (10) and (11) can be employed to evaluate the signal $E(t,r)$. The recorded signals and the theoretical approximations are shown in Fig 2, 3 and 4. The analysis of the signals is illustrated in Fig 5, where the full curves correspond to the theoretical values, while the dashed curves were obtained from the analysis of the measurements. From the measurements and the theory, it is concluded that in 30-60% of the cases observed, the shape of the received signals corresponds to the theoretical model. From this it follows that for most cases, the theory of the ionosphere proposed by the authors (Ref 3) is correct. It was also found that for the propagation distances of over 2,000-3,000 km, the theoretical signals seldom coincide with the shape of the received atmospherics. The causes of this discrepancy

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are not, as yet, understood. There are 5 figures,
2 tables and 9 references of which 5 are Soviet,
3 English and 1 German.

ASSOCIATION: N.-1. in-t Zemnogo Magnetizma, Ionosfery i
Rasprostraneniya Radiovoln (Scientific Research
Institute of the Earth Magnetism, Ionosphere and
Radiowave Propagation)

SUBMITTED: 14th August, 1957

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9.9100

30933
S/570/60/000/017/002/012
E032/E114

AUTHOR: Fligel', D.S.

TITLE: Synthesis of the form of atmospheric

SOURCE: Akademiya nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln. Trudy, no.17 (27). Moscow, 1960. Rasprostraneniye radiovoln i ionosfera. 27-49

TEXT: A brief preliminary description of the present work was reported by Ya.L. Al'pert and the present author in Ref.8 (Radiotekhnika i elektronika, v.4, 202, 1959) and by Ya.L. Al'pert in Ref.9 (Usp. fizich. nauk, v.60, 369, 1956). A more detailed account is given in the present paper. The research is said to be similar to that reported by J. Wait (Ref.7: N.B.S. Report 5513, September 3, 1957). It is stated that Wait's work became known to the present author only after the present research had been completed, although a preliminary account was published prior to the publication of Ref.7. The author has computed atmospheric at various distances from the source, taking into account the necessary number of modes and the dependence of the effective

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Synthesis of the form of atmospherics

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conductivity of the ionosphere on frequency. The computed and observed forms of the signals are compared, and it is shown that this comparison is capable of producing information about the effective conductivity of the ionosphere. Although the method is in principle suitable for practical purposes, it is stressed that its accuracy can only be estimated by direct measurements of the effective parameters of the ionosphere. The analysis is based on the following considerations. The form of the signal received at a distance r from the source can be computed by evaluating the Fourier integral

$$E(t, r) = \frac{1}{2\pi} \int_{-\infty}^{+\infty} g(\omega, r) Q_0(\omega, 0) e^{i\omega t} d\omega \quad (1)$$

where

$$g(\omega, r) = B(\omega, r) e^{-i\tilde{\Phi}(\omega, r)} = \frac{i2\pi k^2}{h} \sum_{n=0}^{\infty} S_{n0}^2 (2) (krS_n) P(C_n) \quad (2)$$

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is the electric or magnetic field of frequency ω above the earth's surface, and

$$Q_0(\omega, 0) = A_0(\omega, 0) e^{i\varphi_0(\omega, 0)} \quad (3)$$

is the spectral density of the radiation emitted by the source in its immediate neighbourhood. It is shown that the problem can be reduced (approximately) to the evaluation of an integral of the form

$$E(t, r) = \frac{1}{\pi} \int_0^{\infty} B(\omega, r) A_0(\omega, 0) \cos(\omega t + \varphi) d\omega \quad (7)$$

Fig. 14 shows a typical comparison between an observed (a) and calculated (6) atmospheric for $r = 1000$ km. It is found that the calculated atmospherics are nearly identical with the observed atmospherics in 40-60% of cases, which must mean that the effective parameters of the ionosphere which are assumed in the calculation must be very nearly the same as the actual parameters. There is some evidence of a discrepancy between the theoretical and the

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Synthesis of the form of atmospheric ³⁰⁹³³
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experimental forms of the atmospheric at larger distances r.
It is stated that this will require further analysis.
Acknowledgments are expressed to Ya.L. Al'pert for directing this
work, to S.V. Borodina for advice, and to V.I. Krayushkina for
assistance in the calculations and in setting up tables and graphs. 4
There are 24 figures, 8 tables and 12 references: 6 Soviet-bloc and
6 non-Soviet-bloc. The four most recent English language
references read as follows:

Ref.5: J. Barlow, G. Frey, J. Newman, J. Franklin Inst., v.258,
187, 1954.

Ref.6: K. Budden, Philos. Mag., v.42, 1-19, 1951.

Ref.7: as in text above.

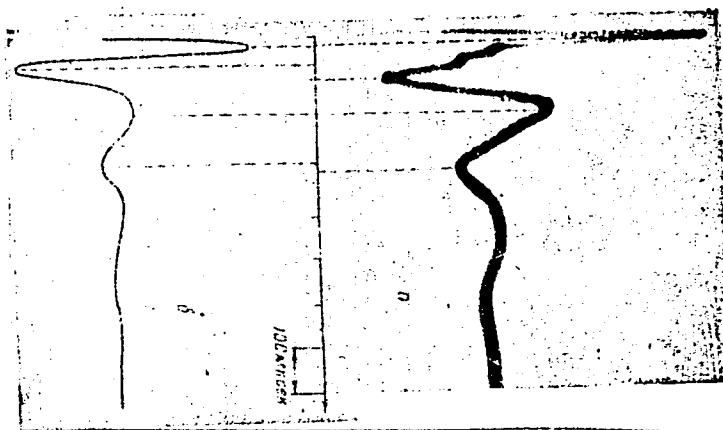
Ref.12: L. Lieberman, J. Appl. Phys., v.27, 1473, 1477, 1956.

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Synthesis of the form of atmospherics

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Fig. 14



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E032/E114

AUTHORS: Borodina, S.V., Kalinin, Yu.K., Mikhaylova, G.A.,
and Fligel', D.S.

TITLE: A review of the present state of research into the
propagation of ultra-long electromagnetic waves

SOURCE: Akademiya nauk SSSR. Institut zemnogo magnetizma,
ionosfery i rasprostraneniya radiovoln. Trudy,
no.17(27). Moscow, 1960. Rasprostraneniye radiovoln
i ionosfera. 130-172

TEXT: Long and ultra-long electromagnetic waves are defined
as those with wavelengths between 3 - 5 and some tens of
thousands of kilometres. Part I of this paper is concerned with
a review of the theory of propagation of ultra-long radio waves,
beginning with G.N. Watson's paper (Ref.1: The transmission of
electric waves round the earth. Proc. Roy. Soc., v.95, 546, 1919).
It is indicated how the various equations formulated to describe
the propagation of electromagnetic waves in the earth—uniform-
ionospheric wave-guides can be evaluated. This is followed by a
summary of the methods which can be used to take into account the
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A review of the present state of ...

finite conductivity and the spherical shape of the earth. A review is then given of attempts at the synthesis of atmospherics, among them the theories of Fligel' (present Symposium, 27-49) and J.R. Wait (Ref.18; The propagation on very low frequencies to great distances. NBS Report v.5513, September 3, 1957).

Part II is concerned with the experimental studies of the propagation of long and ultra-long radio waves. Experimental work on the amplitude and phase of these waves as functions of distance and time is summarised. Direct measurements of the field-strength and the diurnal variations in the propagation of the GBR signal are reviewed. An account is also given of the results obtained by indirect methods, e.g. lightning discharges, analysis of the spectrum of atmospherics by the tuned receiver method and studies of the tails of atmospherics. It is concluded that the experimental study of the propagation of long and ultra-long radio waves has confirmed the basic idea of the wave-guide theory of propagation. Direct measurement of the field-strength at 3000 km from the source showed that interference effects are present up to $r = 1000-2000$ km and are due to the large number of modes taking

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part in the propagation. As the distance increases some of the modes are attenuated and the field amplitude falls off exponentially but remains relatively large. Direct measurements of the frequency stability of the GBR signal showed that the daytime stability at $r = 5000$ km is 10^{-9} over a period of several months and 10^{-10} over a day or two. At the antipodes, the frequency stability is of the order of 10^{-9} per hour. Indirect measurements confirm the results of direct field measurements but in a wider frequency range, namely, 500 cps - 50 kc/s. Analysis of the waveform of atmospherics showed that the wave-guide formed by the earth and the finite-conductivity ionosphere has certain selective properties. At 7 - 15 kc/s and 100-200 c.p.s. there is energy transmission with minimum attenuation. At 2 - 3 kc/s there is maximum absorption. The attenuation at 10 kc/s is greater by 10 db than at 2 - 3 kc/s. The ratio of the maxima in the spectrum of atmospherics on 10 kc/s and 100 c.p.s. varies with distance. At 500 km the maximum on 10 kc/s is 20 - 30% larger than on 100 c.p.s., while at 2000 km this difference disappears altogether. The signal level on 7 - 15 kc/s is subject to appreciable diurnal

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and seasonal variations. During daytime the signal level is lower than at night; during summer it is higher than in winter. The spectral region 40 - 200 c.p.s. exhibits small diurnal variations showing good propagation conditions both during daytime and at night. However, it appears that the difficulties encountered in the design of transmitting antennas on these frequencies cannot be overcome. The phase velocity in the frequency range 1 - 20 kc/s varies irregularly in the neighbourhood of c . In the frequency range 10 - 20 kc/s, the average phase velocity is practically independent of frequency and differs from c by fractions of a percent. As the frequency is reduced the phase velocity becomes appreciably greater than c , for example, at 2 kc/s the phase velocity differs by 10% from c . As the distance is increased from 1000 to 3000 km, the differences from c are appreciably reduced and are equal to a few tenths of a percent. The effective parameters of the lower ionosphere have been determined for larger distances where the zero mode predominates. The experimental values obtained for the ratio of the electron concentration to the collision frequency are found to be in good agreement with the theory of Ya.L. Al'pert and S.V. Borodina (Ref.19; present

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Symposium, 3-26) right down to 3 - 4 kc/s. Thus, direct and indirect studies have shown the propagation of ultra-long radio waves to distances of 3000 to 5000 km as relatively stable during daytime but somewhat less stable at night. The propagation of radio waves with frequencies below 1 kc/s has not as yet been adequately studied either theoretically or experimentally. Direct measurements of the phase velocity as a function of distance and of the effect of the earth's magnetic field on the propagation of ultra-long radio waves is of major practical interest. It is stated that there are no published results in this field. Acknowledgments are expressed to Ya.L. Al'pert for advice and to Yu.G. Ishchuk and G.M. Sosnovskaya for assistance during the writing of this paper.

There are 23 figures, 5 tables and 107 references: 10 Soviet-bloc, 1 Russian translation from a non-Soviet-bloc publication, and 96 non-Soviet-bloc. The four most recent English language references read as follows:

Ref.71: A.D. Watt, B.L. Maxwell. Observations on some low-frequency propagation paths in arctic areas. Trans. IRE v.AP-6, no.3, 308, 1958.

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A review of the present state of ...

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Ref.81: J. Tantry. Automatic atmospherics-waveform recorder.
Indian J. Phys., v.32, 367, 1958.

Ref.84: J. Chapman. The waveforms of atmospherics and the
propagation of very low frequency radio waves.
J. Atm. Terr. Phys., v.11, no.3/4, 223, 1957.

Ref.101: F. Hepburn. Atmospherics with very low frequency
components below 1 kc/s.
J. Atm. Terr. Phys., v.10, 266, 1957.

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S/141/60/003/01/001/020
E032/E414

AUTHORS: Borodina, S.V., Kalinin, Yu.K., Mikhaylova, G.A. and Fligel', D.S.

TITLE: A Review of the Present State of Research into the Propagation of Very Low Frequency Electromagnetic Waves

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1960, Vol 3, Nr 1, pp 5-32 (USSR)

ABSTRACT: This is a review paper treating both theoretical and experimental problems. In the first part a review is given of calculations on the propagation of electromagnetic waves taking into account irregularities in the ionosphere, the finite conductivity and the spheroidicity of the earth. In the second part a review is given of experimental studies in the frequency range 10 cps to 50 Kc/s. Above 3 Kc/s there is good agreement between experimental and theoretical data. It is pointed out that it is necessary to develop a general theory of propagation of very low frequency electromagnetic waves taking into account both the spheroidicity and the finite

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A Review of the Present State of Research into the Propagation of
Very Low Frequency Electromagnetic Waves

conductivity of the earth, particularly above 3 kc/s.
The review is based on 109 published papers.
Acknowledgement is made to Ya.L.Al'pert, Yu.G.Ishchuk
and G.M.Sosnovskaya for their help. There are 14 figures,
and 2 tables and 109 references, 11 of which are Soviet
and 98 Western.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya
radiovoln AN SSSR (Institute of Terrestrial Magnetism,
Ionosphere and the Propagation of Radio Waves, AS USSR)

SUBMITTED: September 19, 1959

Card 2/2

FLIGEL', D.S.

Properties of the coefficients of refraction, attenuation and the coefficient of passing through the ionosphere at low and ultralow frequencies. Geomag. i aer. 2 no.5:886-903 S-O '62.

(MIRA 15:10)

1. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR.

(Ionospheric radio wave propagation)

ACCESSION NR: AP4013137

S/0203/64/004/001/0041/0053

AUTHORS: Fligel', D. S.; Komleva, G. D.

TITLE: Properties of the coefficients of refraction, extinction, and transmission of the ionosphere at low and ultra-low frequencies at night

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 1, 1964, 41-53

TOPIC TAGS: refraction, refractive index, extinction, extinction coefficient, transmission, transmission coefficient, ionosphere, low frequency, ultra low frequency

ABSTRACT: The authors present the results of computing the index of refraction (n), the extinction coefficient (x), the transmission coefficient (S_z), and the average phase velocity (v_z) in the range of 1-100 000 cycles for a model of the night ionosphere. They have shown that these values gradually change with increase in the angle θ between the wave normal and the earth's magnetic field vector until the angle reaches approximately 60° . At a frequency of 100 000 cycles and a height of 3000 km n and x begin to change markedly at $\theta \approx 76^\circ$. At lower frequencies the angular dependence does not become noticeable until higher angles. At

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frequencies of only 1-100 cycles, n and x remain practically unchanged on increase in θ . The coefficient of transmission decreases with increase in θ . A very sharp increase begins at $\theta > 60^\circ$. At low angles the waves pass through the night ionosphere with practically no loss for frequencies ranging from one to almost 100 000 cycles. "We consider it our duty to express our thanks to Ya. L. Al'pert for suggesting this topic and for his guidance in the work." Orig. art. has: 10 figures and 3 tables.

ASSOCIATION: Institut zemnogo magnetizma ionosfery* i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, Ionosphere, and Propagation of Radio Waves AN SSSR)

SUBMITTED: 06Dec62

DATE ACQ: 02Mar64

ENCL: 00

SUB CODE: AS, PH

NO REF SOV: 004

OTHER: 001

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L 17778-66 EWT(d)/EWT(1)/EEC(k)-2/FCC/EWA(h) RB/GW/WS-2
ACC NR: AP6006663 SOURCE CODE: UR/0203/66/006/001/0097/0104

AUTHOR: Guseva, E. G.; Fligel', D. S.

ORG: Institute of Terrestrial Magnetism, the Ionosphere, and Radio Wave Propagation,
AN SSSR (Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN
SSSR)

TITLE: Calculations of low-frequency electromagnetic wave propagation in an Earth-
ionosphere waveguide

SOURCE: Geomagnetizma i aeronomiya, v. 6, no. 1, 1966, 97-104

TOPIC TAGS: geomagnetism, electromagnetic wave propagation, waveguide

ABSTRACT: Theoretical calculations of the amplitude and phase velocity for low-frequency electromagnetic waves in the 1-30-kc region near the surface of the Earth for plane and spherical Earth-ionosphere waveguides are compared with experimental data. Curves for the phase velocity as a function of frequency show nearly identical forms for both the plane and spherical waveguide approximations. However, in a plane waveguide v/c is always greater than 1 (where v is phase velocity and c is

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the speed of light) and approaches unity asymptotically with an increase in frequency. In the spherical waveguide, v/c gradually decreases with frequency, becoming equal to and then less than unity. Curves for v/c as a function of distance calculated for the plane approximation show that the phase velocity is close to the speed of light and changes irregularly with distance. Experimental and theoretical data are compared for the average phase velocity as a function of frequency. These curves show good agreement for calculated and empirical values of v/c down to frequencies of 5-6 kc. There is a considerable divergence between theoretical and experimental data at frequencies below 3-4 kc. Curves for the amplitude spectra of the electric field component at various distances from the source show general agreement between experimental and theoretical data at frequencies above 2-3 kc. The theoretical spectra are somewhat wider and shifted toward the high-frequency side, which may be due to improper selection of parameters. A comparison of data for field amplitudes shows good agreement up to distances of 3000 km. This satisfactory coincidence is nearly the same for the plane and the spherical approximations. The data show that sphericity has little effect on calculations of electromagnetic wave propagation at low frequencies, so that the simpler formulas of the plane approximation may be used. The results also show that the magnetic field has little

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ACC NR: AP6006663

effect at frequencies of 16-30 kc. In conclusion, the authors thank Ya. L. Al'pert who proposed the topic and guided the work. Orig. art. has: 8 figures, 1 table, and 6 formulas. [14]

SUB CODE: 17.09 SUBM DATE: 02Dec64/ ORIG REF: 007/ OTH REF: 008
ATD PRESS: 4208

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ACCESSION NR: AR4033582

S/0189/64/000/002/A033/A033.

SOURCE: Ref. zh. Geofiz., Abs. 2A172

AUTHOR: Fligel', M. D.

TITLE: Radio wave absorption in the ionosphere as indicated by data for Mirnyy station

CITED SOURCE: Dokl. Nauchn. simpoziuma po ionosfere, 1960. Rostov-na-Donu, Rostovsk. un-t, 1961, 54-61

TOPIC TAGS: radio wave, radio wave absorption, ionosphere, ionospheric radio wave absorption, solar activity, magnetic activity

TRANSLATION: The article describes the results of measurements of absorption (L) by the pulse method at Mirnyy in the period July 1957-December 1958 (working frequencies 1.9, 2.2 and 2.6 Mc/s). The diurnal variation of L is approximated well by the formula $(\cos \chi)^n$, where n changes from 0.2 at the equinox to 2.0 in winter. The trend of mean monthly values of midday values L is similar to that at Dixon Island and has no obvious relationship to $\cos \chi$. A relationship is noted between variations L and solar and magnetic activity. The observed values L were used to compute

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the effective recombination coefficient ($\alpha \sim 2 \cdot 10^{-7} \text{ sec} \cdot \text{cm}^{-3}$) and the number with collisions ($\nu = 3 \cdot 10^4 \text{ sec}^{-1}$). N. B.

DATE ACQ: 31Mar64

SUB CODE: AS

ENCL: 00

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S/203/61/001/005/027/028
A006/A101

AUTHORS: Ben'kova, N.P., Turbin, R.I., Fligel', M.D.

TITLE: Solar radiobursts at 28 Megacycle frequency on July 12, 1961

PERIODICAL: Geomagnetizm i aeronomiya, v. 1, no. 5, 1961, 842 - 843

TEXT: Cosmic radio-emission at 28 Megacycle frequency is regularly recorded at the ionospheric department of IZMIRAN for the purpose of studying ionospheric absorption. An analysis of the recordings showed that in some cases chromospheric flares caused a greater intensity of signals, which was particularly high during the chromospheric flare on July 12, 1961. The data recorded show that the chromospheric flare was accompanied by radiobursts of types II and IV which were strongly different as to time and nature. During bursts of type II and IV, the radio-radiation intensity increased in the centimeter, meter and 30 Megacycle range (10 meters). This fact does not confirm the concept that the spectrum of type II bursts rapidly decreases with reduced frequency. The different nature of radio-radiation during II and IV type bursts confirms E.I. Mogilevskiy's hypothesis on different mechanisms of generation: plasma, oscillations in the solar atmosphere

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Solar radiobursts at 28 Megacycle frequency ...

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A006/A101

in the case of type II bursts, and synchrotronous radiation of relativistic electrons in the case of type IV bursts. There are 1 figure and 2 Soviet-bloc references.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln
AN SSSR (Institute of Terrestrial Magnetism, Ionosphere and Propagation of Radiowaves, AS USSR) ✓

SUBMITTED: September 11, 1961

Card 2/2


S/203/61/001/005/024/028
A006/A101

AUTHORS: Ben'kova, N.P., Fligel', M.D.

TITLE: Ionospheric disturbances on November 10-17, 1960

PERIODICAL: Geomagnetizm i aeronomiya, v. 1, no. 5, 1961, 832 - 835

TEXT: Data obtained on magneto-ionospheric disturbances in July 1959 were compared with disturbances of November 1960 and conclusions were drawn on the spectrum of geoeffective radiation of the Sun and the nature of disturbances. The distribution of absorption in the ionosphere from data of 26 stations is represented in graphs, which show also changes in the average hourly values of the H-component of the geomagnetic field in Moscow, the moments of chromospheric flares and the sudden commencement of magnetic storms. It was found that chromospheric flares, accompanied by a higher intensity of cosmic radiation, entailed absorption of the III order which was caused by particles with an energy of several dozens of megaelectron volt. In spite of the high geoefficiency of the flares on November 10 and 11 (Ultraviolet radiation, radio radiation and corpuscular streams) fast and cosmic particles were apparently not generated in them (with an energy of ten megaelectron volt and more). When analyzing the intensity



Card 1/2

Ionospheric disturbances ...

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of corpuscular radiation of these flares an attempt was made of evaluating the southern boundaries of the penetration zone of corpuscles from the magnitude of D_{st} variations of the geomagnetic field. For the active period of November 12, ϕ values calculated varied from 53 to 60°, whilst the actual boundary of polar absorption attained 46°. There are 2 figures, 1 table and 4 references: 2 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, Ionosphere and Propagation of Radiowaves, AS USSR)

SUBMITTED: August 1, 1961

Card 2/2

9.9/100

S/203/62/002/006/007/020
A001/A101

AUTHOR: Fligel', M. D.

TITLE: Geographical distribution of ionospheric absorption

PERIODICAL: Geomagnetism and aeronomiya, v. 2, no. 6, 1962, 1091 - 1094

TEXT: In a previous study of the author, Collection "Ionosfernyye issledovaniya" (Ionospheric Investigations), no. 10, AS USSR, 1962, 5, he analyzed absorption data for 2-Mc radiowaves during low magnetic activity periods in summers 1957 and 1958 and derived a formula expressing absorption as a sum of two components; one of them is conditioned by the undulatory part of the solar radiation; the second part, of apparently corpuscular nature, is somehow related to geomagnetic latitude. The author reproduces this formula and presents the values of empirical coefficients entering it. The present article gives formulae for describing spatial distribution of absorption for the winter and the equinox 1957 - 1958. Thus the proposed empirical formulae make it possible to calculate geographical distribution of absorption for 2 Mc radiowaves and three seasons, winter, summer, equinox, during the periods of high solar ($R \approx 250$).

Card 1/2

Geographical distribution of...

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and low magnetic activity. An important conclusion has been drawn that the structure of the formula proposed turned out to be correct, although there are some differences due to seasonal variations. The empirical approximation formulae represent rather well experimental data, which is seen from the graph given in the article. There are 2 tables and 1 figure. ✓

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln
AN SSSR (Institute of Terrestrial Magnetism, Ionosphere and Radio-
wave Propagation, AS USSR)

SUBMITTED: June 23, 1962

Card 2/2

9.9/20

44453
8/203/62/002/006/009/020
A001/A101

AUTHORS: Bukin, G. V., Fligel', M. D.

TITLE: Winter anomaly in the E-layer of the ionosphere

PERIODICAL: Geomagnetizm i aeronomiya, v. 2, no. 6, 1962, 1103 - 1106

TEXT: There is a peculiar feature, known as winter anomaly, in the seasonal variation of absorption, which consists in the following: absorption level is higher in winter than in summer, the zenith angle of the Sun being the same. It is assumed usually that this anomaly is due to sporadic formations in the lower ionosphere. The authors put forward another hypothesis to explain the winter anomaly from the viewpoint of the conventional ionization equation. Analyzing the expressions for ion formation rate I in winter and summer, they came to the conclusion that electronic concentration is higher in winter than in summer at the same value of the zenith angle of the Sun χ due to different rates of χ variation in different seasons. It follows thereof that winter anomaly must exist in the seasonal variation of critical frequencies of every regular layer. Experimental data from 50 stations all over the world were analyzed and it was

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Winter anomaly in the E-layer of the ionosphere

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found that for the most stations $f_{oE_{win}} > f_{oE_{sum}}$. Moreover, winter anomaly was analyzed for the stations in Moscow and Yuzhno-Sakhalinsk for the periods of maximum and minimum solar activity; its existence was established in both. No correlation was found between maxima of R (average monthly number of sunspots) and f_{oE} . Formulae are given to determine the values of I and α (effective recombination coefficient) from the magnitude of winter anomaly. These values proved to be close to those known from the literature sources. There is comparatively small scatter of the values in different months. There are 2 tables and 1 figure. X

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, Ionosphere and Radio-wave Propagation, AS USSR)

SUBMITTED: June 20, 1962

Card 2/2

FLIGEL' M.D.

Nature of the winter anomaly in ionospheric absorption. Geomag.
i aer. 3 no.4:703-706 J1-Ag '63. (MIRA 16:11)

1. Institut zemnogo magnetizma, ionosfery i rasprostraneniya
radiovoln AN SSSR.

FLIGEL'MAN, F.M., inzh.

Use of phosphate enamels for aluminum enameling. Trudy NIIMesttoproma
no.17:208-220 '62. (MIRA 16:5)

(Enamel and enameling) (Aluminum)

FLIGETMAN, F.M., inzh.

Enameling steel without priming. Mashinostroenie no. 6879-80
N-D '64 (MIRA 1882)

1. GENESIS. I.M.

Ontogenetic and comparative anatomical data on the development of
the substantia nigra. Trudy Gos.inst. po izuch. mozga 16:140-148 '69,
(BRAIN) (MBA 10:7)

6-11-1952
KHYSHOVA, N. A.; FLIGEL'MAN, P. M.; AKATOV, M. Y.

Treatment with dibazol of the residual stage of poliomyelitis.
Zh. nevropat. psikhiat., Moskva 52 no.4:42 Apr 1952. (CLML 22:2)

1. Of the Scientific-Research Institute imeni T. I. Turner (Director -- M. N. Goncharov).

KHILKOVA, Lidiya Stepanovna, ptichnitsa; FLIGEL'MAN, S., red.; ROZHDAYKINA, V.,
tekhn. red.

[I will raise 6000 ducks] Vyrashchu 6000 utok. Kalinin, Kalininskoe
knizhnoe izd-vo, 1960. 15 p. (MIRA 14:12)

1. Kolkhoz "Velikiy put'" Sonkovakogo rayona (for Khilkova).
(Ducks)

VISHNYAKOVA, Ye.S., inzh.; RUMYANTSEVA, N.F., inzh.; BORONICHEV, G.A., inzh.; PITINOVA, L.V., inzh.; PETRUNIN, N.I., inzh.; MESKIN, I.M., inzh.; ANDREYEVA, L.P., inzh.; BISHENKEVICH, G.V., inzh.; RYABININA, A.I., inzh.; MOSHNIN, N.S., red. gazety; KOMKOV, A.I., otv. red.; YUNITSKIY, V.P., red.; FLIGEL'MAN, S.M., red.; ROZHDAYKINA, V., tekhn. red.

[Kalinin Artificial Fiber Combine]Kalininskii kombinat iskus-tvennogo volokna. Kalinin, Kalininskoe knizhnoe izd-vo, 1960.
92 p. (MIRA 15:8)

1. Kalininskiy kombinat iskusstvennogo volokna (for all except Komkov, Yunitskiy, Fligel'man, Rozhdaykina).
(Kalinin--Textile fibers, Synthetic)

FLIGER, N.Ya.

Station for filling sprayers with poison solutions. Zashch. rast.
ot vred. i bol. 8 no.1:29-30 Ja '63. (MIRA 16:5)

1. Vedushchiy inzh. Zaporozhskogo filiala Vsesoyuznogo instituta
elektrifikatsii sel'skogo khozyaystva.
(Spraying and dusting--Equipment)

FLIGER, N.Ya.; BAZDYREV, A.A.

Mechanized station for preparation of poisonous chemical
solutions. Sbor. nauch.-tekh. inform. po elektr. sel'khoz.
no.16/17:76-80 '64. (MIRA 18:11)

FLIGER, N.Ya.

Electric vulcanizing apparatus with automatic regulation
of temperature. Sbor. nauch.-tekh. inform. po elektr.
sel'khoz. no.16/17:81-84 '64. (MIRA 18:11)

FLIGER, N.Ya. [Fliher, N.IA.], inzh.

Electric vulcanizing apparatus with automatic temperature
control. Mekh. sil'. hosp. 12 no.12:6-7 D '61.

(MIRA 17:1)

FLIGER, N.Ya. [Fliher, N.IA.], inzh.

Device for the ZID-4,5 engine. Mekh. sil'. hosp. 13 no.4:26 Ap
'62. (MIRA 17:3)

AUTHOR: Fliginskiy, A.S., Engineer SOV/91-58-3-14/28

TITLE: A Self-Synchronizing Type Synchronoscope for Switching-In
Low Capacity Generators (Sinkhronoskop dlya vklyucheniya
generatorov maloy moshchnosti sposobom samosinkhronizatsii)
Exchange of Experience (Obmen opytom)

PERIODICAL: Energetik, 1958, Nr 3, pp 20-21 (USSR)

ABSTRACT: The problem was to find a simple, yet effective method to
control the frequency difference between the operating ge-
nerator and the one to be started and synchronized with the
first. The author tells how he solved the problem, describing
and illustrating the technical and operational characteristics
of his own synchronoscope based on self-synchronization. His
synchronoscope can work on 220 or 12 V.
There are 2 circuit diagrams and 1 diagram.

Card 1/1

... testing the ball joints and telescoping sections of Cardan shafts.

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 11, 1965, pp. 31

Cardan suspension, Cardan shaft, universal joint.

This Author's Certificate introduces a novel way of testing the joints and telescoping sections of Cardan shafts. The device consists of a dynamometer and two coaxial shafts. The first shaft is connected to a speed reducer and the second shaft is connected to the joints of the Cardan shaft. The joints are tested at a fixed or variable angle of rotation. The testing speed is adjustable.

L 59380-65

ACCESSION NR: AP5017859

ATTN: Vsesoyuznyy nauchno-issledovatel'skiy institut geologii i neftekhimii
All-Union Scientific Research Institute of Geology and Petrochemistry

ACCESSION NR: AP5017859

ENCLOSURE: 01

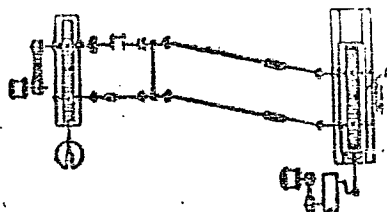


Fig. 1. 1--locking speed reducer; 2--drive for the locking speed reducer

Card 3/3

FLIK, E.P., inzh.

Precision of the manufacture of the Cardan joint parts
of farm machinery. Trudy VISKHOMa no.44:3-16 '64.
(MIRA 18:11)

FLIK, E.P.; GAFANOVICH, A.A.

Increasing the reliability of the Cardan joints of agricultural machinery. Trakt. i sel'khoz mash. no. 11:35-38 N '65.
(MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokho-
zyaystvennogo mashinostroyeniya.

FLIKKER, R. (Omsk)

Let's simplify planning methods. Sov. torg. 35 no.2:47-48 F '61.
(MIRA 14:3)

(Retail trade--Accounting)

WINK, G. A.

Metals

Efforts to conserve metal at the A. A. Zhdanov plant "Krasnoe Sormovo." Vest. mash. 32 No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 195~~5~~², Uncl.

FLINK, Yu.V. inzh.

Interrelation between the carrying cable and the contact wire and
deriving the state equation for chain suspension systems. Trudy MIIT
no.118:5-15 '58. (MIRA 12:2)
(Electric railroads—Wires and wiring)

1

FLINK, Yu. V. inzh.

Effect of wire heating in contact networks on their strength.

Trudy MIIT no.104:288-297 '59. (MIRA 12:9)

(Electric railroads--Wires and wiring)

FLINK, Yu.V., inzh.

Effect of the heating of the carrying cable on the parameters
of contact suspension. Trudy MIIT no.122:91-102 '59.

(MIRA 13:5)

(Electric railroads--Wires and wiring)

FLINK, Ya.V., inzh.

Temperature dependence of the point of inflection of the sag curve
of a freely suspended wire. Trudy MIIT no.144:208-211 '62.

(MIRA 15:10)

(Electric lines---Overhead)

FLINK, Yu.V., dotsent, kand.tekhn.nauk; FRAYFEL'D, A.V., dotsent, kand.tekhn.
nauk; ENGEL'S, G.G., inzh.

Design of semicompensated circuit suspensions with spring wires.
Trudy MIIT no.199:120-129 '65.

(MIRA 18:8)

FLINSKY, Jan, inz.

State and development of repair services of railroad vehicles.
Doprava 7 no.1:8-11 '65.

1. Deputy Minister of Transportation.

FLINT, K.V.; SLESAREVA, N.V.; KLIYA, M.O., kand. geol.-miner.
nauk, otv. red.

[Synthesis and physical properties of diamond; bibliographical index, 1934-1961] Sintez i fizicheskie svoistva almaza; bibliograficheskii ukazatel' 1934-1961. Moskva, Izd-vo "Nauka," 1965. 119 p. (MLA 18:3)

1. Akademiya nauk SSSR. Sektor seti spetsial'nykh bibliotek.

FLINT, V.Ye., kand. biolog. nauk (Moskva)

Keeping snakes in captivity. Priroda 52 no.8:114-115 Ag '63.
(MIRA 16:9)
(Snakes)

1. FLINT, V. Ye.

2. USSR (600)

4. Cage Birds - Feeding and feeding stuffs

7. Feeding insectivorous birds in winter. Est. v shkole no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

FLINT, V.Ya.

Experimental study of the activity of a brood eider. Zool.zhur.
33 no.1:159-161 Ja-F '54. (MLRA 7:2)

1. Biologo-pochvennyy nauchno-issledovatel'skiy institut Moskov-
skogo gosudarstvennogo universiteta im. M.V.Lomonosova.
(Eider)

FLINT, V. Ye.

MUROMTSEVA, T.L.; FLINT, V.Ye.

Keeping fish in a homemade aquarium. Priroda 43 no.7:127-128
Jl '54. (MLRA 7:7)

(Aquariums)

FLINT, V.Ye.;SHILOVA-KRASSOVA,S.A.

Method of observing a flock of titmice. Zool.zhur. 34 no.6:1386-1388
N-D '55. (MIRA 9:1)

1.Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo
universiteta imeni M.V.Lomonosova.

(Titmice)

FLINT, V. Ye.

The biology of the common eider. Biul. MOIP. Otd. biol. 60 no. 4:
53-62 J1-Ag'55. (MLRA 8:12)

(DUCES)

FLINT, V.Ye.; NEFRON, K.M.

Effect of droughts on the distribution of murine rodents in different
habitats in northern Kazakhstan. Biul.MOIP. Otd.biol. 61 no.6:122-123
N-D '56. (MLRA 10:8)
(KUSTANAY PROVINCE--MICE)

AUTHOR: Flint, V.Ye., (Moscow)

26-12-27/49

TITLE: The Eider Duck and the Eider Down Industry (Gaga i promysel gagach'yego pukha)

PERIODICAL: Priroda, 1957,⁴⁶ No 12, pp 99-101 (USSR)

ABSTRACT: The eider duck, *Somateria mollissima*, is the only one among all other eider varieties that gave rise to the eider down industry. The ducks inhabit the coasts of the North Atlantic and the northern parts of the Pacific and Arctic Oceans. As typical sea ducks, they thrive in stony shallow waters, building their nests on rocky or wooded islands. Their worst enemies are big sea gulls and grey crows. Their downs are extensively used by people inhabiting arctic regions. They are well protected in Iceland and their number there is growing every year. In the beginning of the 19th century Russia was the greatest exporter of eider downs in the world. The number of eider ducks has decreased since then, and in many parts in the USSR they have disappeared completely. In 1930 hunting of eider ducks was forbidden and a series of reservations established on several islands in the Barents Sea and in the gulf of Kandalaksha in the White Sea. These bird sanctuaries and careful study of the duck's biology have lead to substantial re-

Card 1/2

The Eider Duck and the Eider Down Industry

26-12-27/49

sults. In 1930 only 475.5 kg of eider downs were delivered at the state trading posts. By 1957 the amount had risen to over 3,000 kilos. The best way to increase the number of ducks is to establish special farms where the birds would be well protected and could build their nests undisturbed. There are 3 figures.

AVAILABLE: Library of Congress

Card 2/2

FLINT, V.Ye.

Structure of the area of distribution and settlement types of some
murine rodents in northern Kazakhstan [with summary in English].
Biol.MOIP. Otd. biol. 63 no.6:7-22 N-D '58 (MIRA 12:1)
(KUSTANAY PROVINCE--MICE)

FLINT, V. Ye., Candidate Biol Sci (diss) -- "The zoological principles of epidemiological prospecting (Experiment in evaluating the epizootiological significance of an area, on the example of tularemia in Kustanay Oblast)". Moscow, 1959. 19 pp (Acad Med Sci USSR, Inst of Epidemiology and Microbiology im Gamaleya), 200 copies (KL, No 25, 1959, 131)

FLINT, V.Ye.; ZEMSKAYA, A.A.; SIDOROV, V.Ye.

Role of ecological bird groups in the feeding of the tick
Ixodes persulcatus. Zool.zhur. 38 no.3:476-480 Mr '59.
(MIRA 12:4)

1. Department of Infections of Natural Fidelity, Institute of
Epidemiology and Microbiology, Academy of Medical Sciences of
the U.S.S.R. (Moscow).

(Sikhote-Alin' Range--Ticks as carriers of disease)
(Parasites--Birds)

FLINT, V.Ye.

Materials on the fauna of Tuva and outlook for its study. Biol. MGIF.
Otd. biol. 64 no.2:125-126 Mr-Apr '59. (MIRA 12:10)
(Erzin District--Zoology)

FLINT, V.Yo.

Materials on the biology of the steppe birch mouse (*Sicista subtilis*
Pall.) Zool.zhur. 39 no.6:942-946 Je '60. (MIRA 13:7)

1. Institute of Epidemiology and Microbiology, U.S.S.R. Academy of
Medical Sciences, Moscow.
(Kustanay Province--Birch mouse)

FLINT, V.Ye.

Zoological principles underlying epidemiological surveys. Zhur.
ob. biol. 21 no.5:353-360 8-0 '60. (MIRA 13:9)

1. Gamaleya Institute of Epidemiology and Microbiology, Moscow.
(KUSTANAY PROVINCE—TULAREMIA)
(RODENTS AS CARRIERS OF DISEASE)

FLINT, V.Ye.

The lizard *Bremias kessleri* Strauch, 1876 as a species hitherto
unknown in the fauna of the U.S.S.R. Zool. zhur. 39 no.8:1264
Ag '60. (MIRA 13:8)

1; Institute of Epidemiology and Mikrobiology, U.S.S.R. Academy of
Medical Sciences, Moscow.
(Tuva Autonomous Province--Lizards)

FLINT, V.Ye.

Biology of the hamster *Phodopus roborovskii* Satunin. Biol. MOIP.
Otd. biol. 65 no.5:98-101 8-0 '60. (MIRA 13:12)
(TUVA AUTONOMOUS PROVINCE--HAMSTERS)

FLINT, V.Ye.: OMILYANCHUK, S.P., otv.red.; STAKHURSKIY, A.Ye., red.;
BEGICHEVA, M.N., tekhn.red.

[Trapping equipment] Orudija lova zivotnykh. Moskva, Izd-vo
"Detskii mir," 1961. 1 fold. (Prilozhenie k zhurnalu "Iunyi
tekhnika," no.7(97)) (MIRA 14:3)

1. Tsentral'naya stantsiya yunyk tekhnikov. Moscow.
(Trapping)

FLINT, V.Ye.; GOLOVKIN, A.N.

Role of the Tanmu-Ola Range as a zoogeographical barrier and the origin of the desert-steppe fauna of Tuva. Zool. zhur. 40 no.4:556-567 Ap '61. (MIRA 14:3)

1. Institute of Epidemiology and Microbiology, U.S.S.R. Academy of Medical Sciences (Moscow).
(Tuva Autonomous Province—Zoogeography)

FLINT, V.Ye.

Hypocolius ampelinus Bp., a new genus and species of birds in the
fauna of the U.S.S.R., Biol. MOIP. Otd. biol. 66 no.1:127-129 Ja-F
'61. (MIRA 14:3)

(TEDZHEN VALLEY—SHRIKES)

FLINT, V.Ye.; GOLOVKIN, A.N.

Comparative ecological survey of the hamsters of Tuva. Biul. MOIP.
Otd. biol. 66 no.5:57-77 S-O '61. (MIRA 14:10)
(TUVA AUTONOMOUS PROVINCE—HAMSTERS)

CHUGUNOV, Yu.D., SAF'YANOVA, V.M.; KUDRYASHOVA, N.I.; FLINT, V.Ye.;
RYZHKOV, M.V.; MAL'TSEV, M.I.

Testing the effect of a mixture of automobile exhaust gases
and insecticide dust for the formation of a protective zone
in a focus of cutaneous leishmaniasis. Vop.kraev.paraz.
Turk.SSR 3:153-156 '62. (MIRA 16:4)

1. Institut epidemiologii i mikrobiologii imeni N.F.Gamal'ya,
Moskva, i Okruzhnoy gosptal' pogranychnykh voysk Turkmenskogo
okruga.

(SAND FLIES--EXTERMINATION) (GERBILS--EXTERMINATION)

CHUGUNOV, Yu.D.; FLINT, V.Ye.; MAL'TSEV, M.I.; KATKOV, Y.M.; SIDOROV, N.F.

Experiment in mapping the habitat of the greater gerbil within
the foci of cutaneous leishmaniasis in southern Turkmenistan.
Vop.kraev.paraz.Turk.SSR 3:157-160 '62. (MIRA 16:4)

1. Institut epidemiologii i mikrobiologii imeni N.F.Gamaleya,
Moskva i Okruzhnoy gospiatal' pograniichnykh voyak Turkmenskogo
okruga.

(TURKMENISTAN--GERBILS AS CARRIERS OF DISEASE)
(TURKMENISTAN--DELHI BOIL)

FLINT, V.Ye.

Ornithofauna of Tuva. Ornitologiya no.5:144-146 '62.

(MIRA 16:2)

(Tuva A.S.S.R.—Birds)

FLINT, V.Ye.; CHUGUNOV, Yu.D.

Materials on the distribution of some birds of Turkmenia.
Ornitologiya no.5:175-176 '62. (MIRA 16:2)
(Turkmenistan--Birds)

FLINT, V.Ye.

Hypocolius ampelinus in the U.S.S.R. Ornitologia no.4:186-188 '62.
(MIRA 16:4)

(Turkmenistan—Hypocolius)

FLINT, V.Ye.; KRIVOSHEYEV, V.G.

Changes in the ornithofauna of the Izmaylovo Park during the
last 25 years. Ornitologiya no.5:300-308 '62. (MIRA 16:2)
(Moscow--Birds)

CHUGUNOV, Yu.D.; FLINT, V.Ye.; SAF'YANOVA, V.M.; KUDRYASHOVA, N.I.

Protection of humans from infection with zoonotic cutaneous
leishmaniasis in populated points of southern Turkmenistan.
Report No.1. Med.paraz.i paraz.bol. no.1:39-43 '62.

(MIRA 15:5)

1. Iz otdela bolezney s prirodnoy ochagovost'yu Instituta epi-
demiologii i mikrobiologii imeni N.F. Gamalei AMN SSSR (zav. -
prof. P.A. Petrishcheva).

(DELHI BOIL) (TURKMENISTAN--ANIMALS AS CARRIERS OF DISEASE)